

Analgesic effect of methanolic extracts of Truffle (*Terfezia boudieri*) in the Cuprizone-Induced Experimental MS in female rats.

Abstract:

Background and Objective: Multiple Sclerosis (MS) is one of the inflammatory diseases that cause CNS invasion and loss of neurological function. It is the most common neurological disease in the world that affects people from a young age. Pain is one of the most common symptoms of MS. The prevalence of pain among MS patients is estimated to be between 30 to 86%. The aim of this study was to investigate the hydroalcoholic effects of *Terfezia boudieri* on pain relief in MS patients by developing a MS model in female mice.

Methods: In this study, 35 adult Wistar rats by weight 30 g were enrolled. The rats were divided into 5 groups of 7 groups each. Normal control group received no extract. The MS group consisted of rats that received 40 days of oral cuprizone (water soluble) toxin for 40 days at 0.1 gr / kg. The 250 mg / kg extract group received MS and 250 mg / kg extract. The 500 mg / kg MS extract group received 500 mg / kg extract. The 750 mg / kg MS extract group received MS. And 750 mg / kg extract. Cuprizone was administered orally (water soluble) daily for 40 days at 0.1 mg / kg as a toxin to form the MS model. Pain tolerance test in groups was performed by hot-plate and tail-flick apparatus.

Results: Cuprizone toxin caused MS symptoms in mice and significantly decreased weight in mice. *Terfezia boudieri* extract at 500 and 750 mg doses was effective in restoring the weight of the rats. In the delayed time to pain response to assess the antinociceptive effect of the extract, the MS group was significantly reduced and the time difference. The MS group with the control group and the extract group with 750 mg had a significant difference with the MS group. Use of *Danbolan* fungus extract at 750 mg dose significantly prevented superoxide dismutase activity.

Conclusion: It seems that *Terfezia boudieri* extract has beneficial effects in the control of MS.

Keywords: MS, pain, Truffle, cuprizone